CWP 2013 Groundwater Content Enhancement
REGIONAL GROUNDWATER REPORT
List of Potential Graphics by Subject Area

Groundwater Supply and Development

Figure:

- Chart showing the statewide number of well logs by year and well type (statewide only).
- Chart showing percent area & population covered by alluvial versus fractured rock groundwater basins (statewide and HR).

Table:

- Table listing groundwater basins & subbasins (HR level only)

Map:

- Map showing distribution of Public Supply Wells (statewide & HR).
- Map showing distribution of Bulletin 118-03 Groundwater Basins. (statewide & HR)
- Map showing distribution of Priority Groundwater Basins (statewide & HR)
- Map showing over overlay of Priority basins as determined by GAMA Program, CASGEM Program, and State Board Hydrologically vulnerable areas (statewide only)

Groundwater Use

Figure:

- 3D Pie charts showing breakdown of gw use by volume & percent for Urban, Ag, & Managed Wetlands beneficial uses (statewide & HR).
- 3D Pie chart showing percent gw demand versus percent total water demand from all sources…maybe use map similar to CM RMS (statewide & HR).

Table:

- Breakout of gw use/demand by beneficial use, by basin/county (HR level reporting) and by HR level (for statewide reporting).

Map:

- Map showing volume of gw demand versus total demand for both alluvial basins and fractured rock regions (for Statewide reporting show breakdown by HR; for HR reporting, show breakdown by basin...basin breakout will be dependent on basin size).

Groundwater Monitoring Efforts

Figure:

- Nothing proposed

Table:

- List of groundwater level monitoring wells by entity and type (HR level only). Don't want a long list of wells, just a list of the MEs, followed by the number of wells by well type.
- List of extensometers by entity and type (HR level only).

Map:

- Map showing the location of groundwater level monitoring wells by ME (statewide and HR level…but statewide map won't attempt to break out by ME…)

- Map showing the location of extensometers (Statewide and HR levels).
- Map showing gps land subsidence monitoring grid networks (HR level only)

Aquifer Conditions

Figure:

- Chart showing Sacramento Valley Water Year Type Index, 1906-2011 (Statewide only)
- Chart showing San Joaquin Valley Water Year Type Index, 1906-2011 (Statewide only).
- Long term groundwater level hydrographs (HR level only…about 3 per). May want to consider presenting contours via a map to show additional land use or water source features. Also want to consider adding hydrographs representative of a particular land use, water use, or showing the effects of WUE measures (canal lining).
- Hydrographs from key multi-completion dedicated monitoring wells having a high frequency of groundwater level readings (datalogger) wells to illustrate vertical gradient between aquifer systems, and the seasonal fluctuation of these gradients.
- Annual spring to spring change in storage bar chart or ??? (HR level only…chart needs to include water year type, along with cumulative and individual year change in storage values.
- Figure illustrating the surface water – groundwater connection and highlighting the axiom that surface water and groundwater are the same source.

Table:

- Table listing Change in Storage by HR (statewide level) and basin/county (HR level). Table will include a change in storage for the spring to spring periods of 2006-07, 2007-08, 2008-09, and 2000-10, and show a range of change in storage values over a range of Specific Yield values.
- Where data is available, table listing change in storage associated with various modeling analysis…(likely CV only)

Map:

- Depth to Groundwater (color ramped) contour map (Statewide and HR level)
- Spring 2006 (wet year) and Spring 2008 (critically dry year) color ramped groundwater elevation contour maps (Statewide and HR level).
- Spring 2006 to Spring 2008 change in groundwater levels color ramped contour maps
- Map showing the location of groundwater level monitoring wells by ME (statewide and HR level…but statewide map won't attempt to break out by ME…)
- Map showing groundwater basins and level of data available for calculating change in storage (statewide and HR level).
- Map showing color-ramped change in storage (HR level only)

Groundwater Management Activities

Figure:

- Pie charts showing breakdown of challenges with respect to implementing gw management plans.
- Pie chart showing number of full, partial, and non WC 10753.7 compliant GMP (statewide and HR level).

Table:

- Table listing GMPs, year last updated, basin covered, and signatory agencies (Statewide and HR level)
- Table listing required, voluntary, and recommended GMP components (statewide only)
- Table listing adjudicated basins (statewide and HR level)
- Table listing County Ordinances (Statewide and HR level).

Map:

- Map showing location of adjudicated basins (Statewide and HR Level)
- Map showing location of County Ordinances (Statewide and HR Level)
- Map showing location and coverage of GMPs.
- Map showing GMPs versus high, medium, and low priority basins (statewide & HR level).

Case Studies of Groundwater Management

Figure:

- Inset information box highlighting GMP challenges and successes associated with a particular type of groundwater management area…declining aquifer, saline intrusion, contamination issues, fractured rock aquifer, full aquifer, etc. (statewide level only ??).

Table:

- No tables proposed.

Map:

- Map showing location of GMP area.

Integrated Multi-benefit Groundwater Management Opportunities

Figure:

- 3D pie charts showing breakdown of conjunctive management projects by activity type (banking, recharge, in-lieu, etc.), and water source. (Statewide and HR level).
- Chart showing annual production estimates associated with conjunctive mgmt activities (statewide and HR level).

Table:

- Table listing of projects by type and general location (statewide and HR level).

Map:

- Map showing location of Conjunctive mgmt projects (statewide and HR level). .

Groundwater Budget and Indicators of Sustainability

Figure:

- No figures proposed at this time.

Table:

- Table isting of sustainability indicators relating to groundwater.

Map:

- No maps proposed at this time.

Groundwater Data Gap Analysis

Figure:

- Pie chart showing breakdown of common data gaps by data type (Statewide and HR level).

- Figure illustrating the importance of consistent, long-term, baseline data collection (statewide only).

Table:

- Table listing major groundwater data gaps which prevent effective management of this resource (statewide only).

Map:

- Map showing the location of some key data gaps…gw level monitoring, gw subsidence monitoring, gw quality monitoring, gw management, etc.